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 NO CHANGE IN CLASS. ☐
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 NEXT REVIEW DATE: _____
 12 April 1961

MEMORANDUM FOR: THE RECORD AUTH: HR 70-2
 DATE: 20/82 REVIEWER: 010856

SUBJECT : Meeting with [REDACTED]

1. Time & Place of Meeting: The meeting was held on 24 March 1961 at [REDACTED]

2. Attendance: [REDACTED]

3. Purpose of Meeting: Discuss the F.M. Radar Detection project.

4. Discussion: [REDACTED] what they have accomplished on the program to date. [REDACTED] showed a block diagram of the system and went through it, explaining the portions that are now built. [REDACTED] has completed the frequency translator, the power supply, the sawtooth generator, the active filters, and the high voltage circuits for the backward wave oscillator. [REDACTED] not yet received the B.W.O. tube, although delivery is expected daily. [REDACTED] working on the mechanical scanner (nearly completed), spectrum analysis, and the problems of antenna, display, and fast scanning. [REDACTED] integrated the components they have finished and determined that the system is compatible.

[REDACTED] discussed the scanning problem. It was pointed out that any automatic scanning does away with the operator experience element. A compromise between automatic scanning and operator scanning may have to be used to allow for operator experience, yet scan more swiftly than possible by manual scanning. [REDACTED] proposed the idea of a frequency scanner, that is, an azimuth resolution system instead of a range resolution system. Such a system would use the phase difference between the beat receiver signals and the signal from the transmitter or local oscillator. [REDACTED] felt that this wouldn't work because of the poor s/n conditions and the front surface reflections. It was concluded that both groups would continue to study the scanning problem.

[REDACTED]

FROM THE WALL, [REDACTED] moving window approach, that is, to cover the wall with an absorbing cloth with windows cut in it. Then it would be possible to illuminate a particular area and not be worried by other interferences. The difficulty is the time involved in setting up and checking the areas.

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[] countered with the idea of keeping the horn apertures to a specified size which would give the same result and yet not require the use of absorbing cloth.

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[] suggested a system using four transmitters and four separate receivers, range-gated, or the use of a parasitic array, to see if either would focus the beam properly. [] went through some of the antenna calculations on the systems. The four transmitter-receiver systems looked promising enough to warrant completing the mathematical calculations and some experimental work. [] did not want to get into the antenna problem but they have to if the design of the various equipment pieces are to be compatible.

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[] stated that they would "kick around" the antenna and scanning problems and attempt to have some sort of an answer for the next meeting, scheduled for sometime near the end of April.

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[] had been very thorough in their approach and were doing an excellent job. [] microwave group was as competent and current as any group they could assemble or knew of.

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